

## HEATING UNIT WITH TEMPERATURE SENSOR

### ABSTRACT OF THE DISCLOSURE

A heating unit includes a bridge having an arm in which there is located a heating element, and a circuit for directing a sensing current through the heating element. The circuit of the present invention reduces the duty cycle of the sensing current, thus reducing the average sensing current and allowing the use of higher peak sensing currents. In one embodiment, a set of zener diodes determines the start and stop points of the sensing current pulses. In another embodiment, the start and stop points are determined by electronic logic performed by a quad comparator. In another embodiment, one of the zener diodes is replaced by a SIDAC. The invention allows sensing of heating elements having very small temperature coefficients. The circuits of the invention produce a sensing current which is relatively unaffected by variations in supply voltage.